

ABSTRACT

[0043] In one aspect of the invention, a motor having improved stiffness is provided. In one embodiment, the motor includes a stationary shaft, a hub, a thrust plate and a counter plate. The thrust plate is coupled to the shaft. The hub is rotatable about a central axis of the shaft. The counter plate is coupled to the hub and has the shaft extending therethrough. The counter plate and the thrust plate define at least a portion of a fluid dynamic bearing, wherein at least a portion of counter plate and the thrust plate form a capillary seal therebetween. The capillary seal enhances motor performance by providing a fluid reservoir for the fluid dynamic bearing, allowing fluid to be added to the hydrodynamic bearing without motor disassembly and providing a passage for air to escape from between the bearing surfaces. In one embodiment, the motor is particularly suitable for disc drive applications.